

The Pillars of Media and Information Literacy in Times of Artificial Intelligence¹

Los pilares de la alfabetización mediática e informacional en tiempos de la inteligencia artificial

Os pilares da alfabetização midiática e informacional em tempos de inteligência artificial

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Abstract: This article reflects on the pillars of media and information literacy (MIL) in the context of artificial intelligence (AI). As AI-based technologies are integrated into the contemporary media ecosystem, the need to develop skills that enable critical and effective interaction with these systems becomes increasingly urgent. Key skills such as access, analysis, creation, reflection, and action are highlighted, with a proposed update for each to address the challenges and opportunities that AI presents. The final reflection emphasizes the importance of adapting and expanding MIL competencies to strengthen civic engagement and critical thinking in an algorithm-mediated world.

Keywords:

Media Literacy, Artificial Intelligence, Digital Technologies, Algorithms, Civic Engagement, Media Ecosystem

Resumen: Este artículo reflexiona sobre los pilares de la alfabetización mediática e informacional (AMI) en el contexto de la inteligencia artificial (IA). A medida que las tecnologías basadas en IA se integran en el ecosistema mediático contemporáneo, la necesidad de

¹ This translation from a Spanish original was AI-assisted.

desarrollar competencias que permitan una interacción crítica y eficaz con estos sistemas se vuelve cada vez más urgente. Se destacan las habilidades clave, como el acceso, análisis, creación, reflexión y acción, proponiendo una actualización de cada una de ellas para enfrentar los desafíos y oportunidades que la IA presenta. La reflexión final subraya la importancia de adaptar y expandir las competencias AMI para fortalecer la participación ciudadana y el pensamiento crítico en un mundo mediado por algoritmos.

Palabras clave:

Alfabetización mediática, Inteligencia artificial, Tecnologías digitales, Algoritmos, Participación ciudadana, Ecosistema mediático

Resumo: Este artigo reflete sobre os pilares da alfabetização midiática e informacional (AMI) no contexto da inteligência artificial (IA). À medida que as tecnologias baseadas em IA são integradas ao ecossistema midiático contemporâneo, torna-se cada vez mais urgente desenvolver competências que permitam uma interação crítica e eficaz com esses sistemas. São destacadas habilidades-chave como acesso, análise, criação, reflexão e ação, com uma atualização proposta para cada uma delas, de forma a enfrentar os desafios e oportunidades que a IA apresenta. A reflexão final enfatiza a importância de adaptar e expandir as competências da AMI para fortalecer o engajamento cívico e o pensamento crítico em um mundo mediado por algoritmos.

Palavras-chave:

Alfabetização midiática, Inteligência artificial, Tecnologias digitais, Algoritmos, Engajamento cívico, Ecosistema midiático

1. Introduction

The media and large technology companies are de facto powers in contemporary societies. They not only influence the construction of imaginaries and the configuration of the public agenda but can also serve as instruments to defend the interests of political and economic agents. In other words, power structures underlie the media's daily functioning— analog and digital.

This phenomenon has been widely studied. Some approaches directly point to the need

for people to develop the capacity to question and reflexively consume the messages broadcast in the media. From this perspective, since the second half of the last century, various analytical constructs have been coined (Trejo Quintana, 2017), such as "educommunication" (Oliveira, 2009), "media education" (Bacher, 2013), "media literacy" (Center for Media Literacy, 2003; Jenkins et al., 2009), to name a few. In the 21st century, media and information literacy (MIL) began to be used with the same purpose and from a similar perspective.

The great push for MIL came in 2011 when UNESCO (2011) promoted this term to analytically integrate two critical areas in the interactions that take place in the current digital environment: 1) the media and 2) the informational. This construct sought to respond to the challenges posed by phenomena such as the overabundance of information and the dissemination of messages and discourses that play a fundamental role in forming opinions, among others.

In the context of Artificial Intelligence (AI), Media and Information Literacy is highly relevant to developing skills that allow us to understand how algorithms work and how they influence the distribution of information and decision-making processes. This text reflects on the convenience of adapting the conceptual foundations of MIL to the new challenges and opportunities that AI brings with it.

2. Theoretical framework: AI in the contemporary media ecosystem

Although Artificial Intelligence is not a new technology, its wide dissemination is a novelty. Although AI does not constitute a means of communication, it is a technology inserted into the current media ecosystem.² Algorithms impact the dynamics of consumption, interpretation, production, information habits, and the configuration of discourses. From the perspective of media ecology (McLuhan, 1964), it is understood that media and technologies function as languages that generate communicative codes. These codes play a fundamental role in the perception and orientation of human actions (Islas, 2015) and, to that extent, in forming public opinion.

The relevance of analyzing the dynamics that occur in the media ecosystem lies not only in the fact that it is where the circulation and generation of information occurs, as well as communicative acts –fundamental in themselves–but also because of the function it fulfills as a space for the dissemination and collective production of knowledge. Thus, extending access to

² Following UNESCO (2024), AI is “a collective system of software, hardware, algorithms, networks, etc.”

and use of media and technologies so that individuals and societies can get the most out of them would reduce the digital divide (van Dijk, 2005).

It is widely recognized that the digital divide exacerbates pre-existing inequalities, deepens and perpetuates marginalization, restricts the entire exercise of political and civic rights, and significantly limits educational opportunities. This gap accentuates social divisions between individuals, communities, and countries. Thus, barriers to access, use, and development of capabilities to take advantage of technological innovations, including artificial intelligence, have become critical factors that amplify structural disparities and make equity impossible in contemporary societies.

3. Skills for an algorithmic world

Access to and use of technologies and media should concern governments and societies. They should also be worried about developing skills so individuals can interact and effectively take advantage of the contemporary media ecosystem's technologies.

MIL becomes essential with the increasing integration of Artificial Intelligence into this ecosystem. While AI offers enormous benefits, it can also bring unintended consequences. A clear example is the "filter bubble" effect: the limitations in accessing information diversity and the reinforcement of pre-existing biases caused by algorithmic programming and automation (Aranguren, 2019).

How should MIL adapt to an environment where artificial intelligence mediates much information flow? What new skills are necessary for people to interact effectively with AI-based technologies? Critical digital literacy is imperative, and it not only analyses information but also allows us to understand algorithms' fundamental role in its distribution. The first proposal consists of updating the definitions and actions that support media and information literacy and adapting them to the contemporary challenges posed by AI.

Following Renee Hobbs' proposal (2010), the five basic skills necessary in literacy processes in the 21st century are access, analyze, create, reflect, and act. Below is an outline of the possible update of the skills above, given the incursion of AI:

- a. Skill: Access.** It refers to the technical skills to obtain information and use resources to expand knowledge in any field effectively, efficiently, and ethically.

- **Access in times of AI.** Since excessive personalization can lead to "information bubbles" and biases in inaccessible content, it is essential to promote the development of tools that allow users to understand how information is selected and prioritized by algorithms. The access competence must include identifying transparency and "neutrality" in systems driven by Artificial Intelligence.

b. Competence: Analyze. It is the ability to evaluate and verify the content accessed in any means of communication (analog or digital). Developing this competence allows us to assess information sources' credibility, veracity, and biases to be aware that any information, message, or discourse disseminated is financed in some way and responds to particular interests.

- **Analyze in times of AI.** Because the use of AI to analyze large volumes of data can introduce algorithmic biases that are not always visible to the user, the development of analytical capacity must underline the skills to evaluate and verify the results provided by AI. Now more than ever, the impartiality of algorithms must be questioned, and how biases embedded in systems can influence the interpretation of messages and speeches must be considered. Thus, the development of analytical capacity is essential to identify the technical functioning and the interests and ideologies behind any content.

c. Competence: Create. This involves developing skills to generate information and create communicative products with a defined purpose, creatively and ethically. The purpose is to develop skills to produce and share information and knowledge of various kinds. One of the most important objectives is to generate confidence among citizens in freely exercising their right to express themselves.

- **Create in times of AI.** It is essential to be cautious about the automated production of messages, images, speeches, and content using AI-based media. When developing the "create" competency, it must be noted that there is a danger of disseminating and generating decontextualized or manipulated content in bad faith. On the contrary, the AMI seeks to encourage creative and

positive capacities to take advantage of artificial intelligence, always explaining the intention with which any communicative product is generated. The emphasis should be on understanding that one has a social and ethical responsibility when creating content.

d. Competence: Reflect. This competency underlines the importance of having emotional and intellectual skills to think about one's own experience in using the media and recognizing that interaction with them impacts self-esteem, attitudes, behaviors, relationships, and social practices. This competency seeks to develop a sense of social responsibility, ethical principles, and the protection of one's own and others' rights.

- **Reflect in times of AI.** The manipulation of personal data can limit critical reflection by influencing people's decisions using AI-based media. In this context, the "reflect" competence should include a self-assessment of how AI systems affect people's autonomy and influence or guide consumption patterns through predictive and behavioral analysis. Media and information literacy should strengthen its actions in fostering capacities that help warn about and resist algorithmic manipulation and maintain a critical stance on the sources and content consumed.

e. Competence: Act. As part of the competencies that underpin MIL, it seeks to enable people to participate and make decisions thoughtfully and ethically. This competency enhances people's agency.

- **Act in times of AI.** To achieve an advanced level of media and digital literacy, it is necessary to encourage people to proactively and ethically participate in their immediate and mediate environment. The objective of this competency is to ensure that people use AI to amplify their participation critically and socially rather than simply following the automatic recommendations of algorithms. This implies a deep understanding of how AI systems work on digital platforms.

4. Final reflection

Promoting Media and Information Literacy seeks to impact two levels: individual, by providing people with competencies that enhance their critical and analytical skills, and social, by promoting attitudes to strengthen democracies. This is reflected in AMI initiatives to combat disinformation and fake news, eradicate stereotypes and hate speech, promote scientific understanding, and stimulate critical thinking and civic engagement.

In the context of Artificial Intelligence, there is an urgent need to adapt and expand AMI competencies. Literacy is essential, and it promotes the efficient use of technologies and develops constant critical vigilance over their implementations and effects in various social spheres. Despite the poor uses, misuse, or unethical practices that may arise from using AI, these should not overshadow its multiple advantages. Instead, work must be done on developing a 21st-century epistemology that allows us to understand and apply technologies responsibly, ethically, and inclusively for the common good.

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